Chapter 10
The Potential of Sustainable Forestry Certification for Smallholder Tree Growing

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Abstract This chapter's aim is to investigate the potential of sustainable forestry certification for smallholder tree growing. Certification can be important for different stakeholders in the value chain of timber and timber products. By certification, consumers can choose on the basis of more sustainable behavior. For the manufacturing industry, certification can help to improve its image, and in the long run assure its resource input. For the producers of the timber resources, certification can help in achieving market access and can be the basis for long-term sales agreements. There are a number of certification systems for sustainable forestry, some of them operating on a global level, like particularly the Forest Stewardship Council (FSC) and the Programme for Endorsement of Forest Certification schemes (PEFC). However, certification in developing countries lags behind: in 2006 these countries only comprised two percent of the certified forests. A recent FSC program was aimed at timber production by Smallholders and Low Intensity Forests (FSC-SLIMF). This may alleviate the barriers faced by producers in developing countries, for both individual and community forestry. Before starting a process of certification, the costs and benefits along the chain need to be carefully examined, including market perspectives. In general, certification is only useful to an international market, which with others sets requirements on the choice of tree species and timber quality. As a case study, special attention is paid to the potentials of certification of forestry plantations in the Philippines.

Keywords Developing countries, environmental certification, SLIMF, sustainable forestry certification, tree plantation

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10.1 Introduction

The general question in this chapter is what role sustainable forestry certification can play in the conservation of forests by smallholders. Certification is typically a communication instrument, providing information between stakeholders in a given value chain.

Firstly, an overview will be given of the different types of certification, i.e., those related to environmental certification and to the broader sustainability certification. Section 10.3 will outline the potential benefits of certification for different stakeholders in the chain of custody and Section 10.4 will deal with the benefits for forest managers and workers, and a link will be made to the chapter from Lasco (Chapter 9), stressing the need to involve all relevant stakeholders in the value chain of reforestation. Section 10.5 is an overview of global developments in forestry certification, while Section 10.6 goes into the specific requirements set for certification under the authority of the Forest Stewardship Council (FSC), the oldest global initiative in this field. In Section 10.7, specific attention is paid to the development of the requirements set for forest plantations, with an example in an industrialized country (the Netherlands). Section 10.8 discusses the barriers to the certification of smallholders' forests, particularly in developing countries, followed in Section 10.9 by a description of a new FSC program that focuses on small and low-intensity forest management and addresses some of the existing barriers. This chapter concludes with a case study on the prospects for smallholder forestry certification in the Philippines.

10.2 Environmental and Sustainability Certification

Two main types of certification can be distinguished, environmental and sustainability certification. Environmental certification focuses on the environmental performance of production processes of the resources and the resulting products. According to the triple-bottom-line approach (Elkington 1997), sustainability certification has a broader scope, including requirements of social, environmental and economic dimensions.

The best-known environmental certificates are founded on the standards of the International Organization for Standardization (ISO). There is the 14000 series, with the 14001 standard underlying the certification of environmental management systems (EMS) of industrial companies (ISO 1996). The 14020 series deals with three types of product labelling: product labels with third party verification (Type I labels according to ISO 14024 [ISO 1999a]), product claims by the companies themselves (Type II labelling according to ISO 14021 [ISO 1999b]) and product declarations, which are information sheets, comprising the environmental specifications of the product and its upstream processes (Type III labelling according to ISO 14025 [ISO 2000]). There is also the 14040 series dealing with Life Cycle Assessment or LCA, which is required for the underpinning of Type III labelling

and can also be used to support Type I labelling, like the Blue Angel in Germany, the Green Swan in the Nordic countries, and the EU eco-labelling scheme (cf. Mungkung et al. 2006).

Sustainability certification can also deal with products, as is the case with products from the Body Shop, but its focus is usually on natural resources. Thus, there are certificates for sustainable forestry (including the certificates under the authority of the FSC; www.fsc.org) and for sustainable fisheries (including certificates under the authority of the Marine Stewardship Council MSC; www.msc.org). There are ongoing activities to bring the mining and metals industries under the framework of sustainable development, initiated by the International Council for Mining and Metals (ICMM) (see the Minerals, Mining and Sustainable Development (MMSD) project (www.icmm.com)). To enhance sustainable agriculture, the best-known certification scheme is organic farming but there are also initiatives within the framework of conventional farming, for example from retailers, such as the EUREP-GAP certification (www.eurep.org) (see also De Snoo and Van de Ven 1999; Manhoudt et al. 2002). Sustainable forestry certification, like that under the FSC, and fisheries certification under the MSC, involves verification by a third party, and can therefore also be regarded as a form of Type I labeling.

These different types of certificates need not be exclusive. There are sound reasons for the larger forestry companies to aim at an FSC certificate combined with an EMS certificate according to ISO 14001 (Hortensius 1999). The focus of the rest of this chapter will be on the sustainability certification of forestry.

Sustainability certification has two principal components: legality verification, that is the assurance that the forestry activities are legal, and sustainable forestry management. Thus, certification of sustainable forestry management, together with the certification of the management of the chain of custody, presupposes legality verification. Sometimes a plea is made for a step-by-step approach: first, realization of legal forestry and the protection of high conservation value forests (HCFVs) and then sustainability certification (cf. Jurgens 2006).

10.3 Benefits of Forestry Certification – The Chain of Custody

The most direct benefits of forest certification concern the forests themselves. This relates to sustainable harvesting of forest products, and the enhancement of biodiversity. Here we will focus on the potential benefits for the different stakeholders in the value chain. These are mainly producers of the timber resource, product manufacturers, retailers and consumers. In fact a major distinction can be made between the forest managers and forest workers who deal with the sustainable forestry management itself and the other stakeholders in the value chain, who deal with the so-called “Chain of Custody” certification, ensuring that certified timber will not become unduly mixed up with non-certified timber. In this section we will discuss the benefits for the main stakeholders of the chain of custody. As Lasco (Chapter 9, this volume), when focusing on reforestation, points out, reforestation

can only become a success if all activities in the chain are functioning well, each of them adding value, with each of the stakeholders having his own benefits. We start with the chain-of-custody stakeholders and in the next section will discuss the benefits for the forest managers and workers.

At the end of the chain are the consumers and the general public, who are the real drivers for certification. It is their choice of sustainable production and consumption, which ultimately matters, and the certification of timber products is instrumental in this. In Europe, in countries such as Finland and Austria, they are close to reaching 100 percent certification of their forests but there is often still a lack of demand by consumers (UNECE/FAO 2006). This explains why the potential supply of certified products still exceeds the actual demand in many markets (ibid). In South-East Asian countries, both demand and supply are currently low. The influence of the consumer may be direct or indirect. A direct influence means, it is consumers who choose a sustainable product, whereas an indirect influence is where they choose to go to a retailer who sells sustainable materials and products (Udo de Haes and De Snoo 1996, 1997).

Retailers are the stakeholders who are upstream of the consumer, and product certification is often primarily aimed at them rather than at the ultimate consumers. It then becomes an instrument for business-to-business communication. The benefits to the retailers are mainly related to the improvement of their image, thus supporting their "license to operate". They are often the prime movers in the value chain (Klooster 2005). Examples of retailers involved in the selling of certified timber include Ikea, Brico, Gamma, B&Q and The Home Depot, the world-largest do-it-yourself (DIY) market.

On the next level are the manufacturers. Societal image is also an important driver for them but these companies can also have a more specific aim, namely the long-term assurance of their resources. This holds true for other natural resources like fish. Thus Unilever contributed greatly to the establishment of the MSC, in part to ensure the long-term availability of their fish resources.

10.4 Benefits of Forestry Certification – The Forest Managers and Forest Workers

We can distinguish between three types of potential benefits of forest certification for forest managers and forest workers, who form the main target group of this chapter. Firstly, there are the direct economic benefits of potentially higher profits for the forest managers. Secondly, there are indirect economic benefits, like market access and sales agreements and thirdly, there are non-economic benefits.

The direct economic effects of certification are a rather ambiguous issue. The main question is whether the public is willing to pay a higher price for certified timber products. Such price premiums are logical and necessary to cover the costs related to certification but they appear to be rather varied in practice. There are the so-called willingness-to-pay studies, in which customers are asked what additional

price they are prepared to pay for certified products. These studies give rather variable results but quite a number claim to have identified a positive attitude of customers. For instance, a recent study by Aguilar and Vlosky (2007) on a number of consumer products found a willingness-to-pay, which varied between 10 percent and 25 percent, this mainly depending on the income of the consumers. But similar research indicates that the market for certified products is rather limited; see Kollert and Lagan (2007) for an overview.

Willingness-to-pay studies do not necessarily reflect what consumers will do in reality. Empirical studies must be done to clarify this issue but they are rare. A Finnish study that compared timber certified under PEFC (the Programme for Endorsement of Forest Certification schemes, see Section 10.5) with non-certified timber exported to the UK and Germany, showed that certification leads to better customer satisfaction and a more positive public reputation, but not to improved financial performance (Owari et al. 2006). For most producers, charging a price premium proved impossible. This may well be due to the fact, that the certification market is dominated by a small number of large scale suppliers and buyers, who are not willing to pay such a premium (Taylor 2005).

But there are empirical studies with more positive results. Kollert and Lagan, in a study conducted in Sabah, Malaysia, compared a forest unit certified by FSC (see Section 10.5) with two units without certification. They found a 40 to 56 percent higher price for certified heavy hardwood, a 17 to 30 percent higher price for medium hardwood, a two to eight percent higher price for light hardwood and no premium for mixed types of timber. But the forest units were not strictly comparable: the FSC plantation was the only state owned unit, causing a potentially better market entry. In a study near to Sao Paolo, Humphries and Kainer (2006) found that FSC certified timber obtained the formal market price, instead of the usual local price, which is four times lower. The authors argued that this was caused by better market access due to the certification. Nebel et al. (2005) also found a market price for FSC certified timber in a large-scale project in Bolivia, which was five to 51 percent higher than for non-certified wood. As the certified forests there are managed by only five companies, the authors argued that the effects could not be separated from marketing strategies. Thus, the overall picture in the empirical studies seems to be that price premiums are available to most producers in Asia-Pacific (Cashore et al. 2006), but are obtained only in special situations, particularly linked to a better market access.

Another potentially very important economic factor is donor support. In many case sudies, the transition process was supported by international donor organizations, an example being Nebel et al.'s (2005) case study in Bolivia, dealing with five large forestry companies. A study on certified community forestry conducted by Markopoulos (1998) in the same country even came to the conclusion that the positive economic result was largely due to donor support. In this context, it should be borne in mind that donors will in general support a transition period. They can greatly help a project get off the ground, but they will not guarantee economic sustainability.

Other benefits for forestry managers are the indirect economical ones of better access to markets and long-term sales agreements. The European and, to a lesser degree the North American, markets increasingly demand certification of their imported timber products. The importance of this has already been seen in the discussion

of examples of price premiums. The dominance of a small group of large retailers (see Section 10.3) renders long-term sales agreements very important for the economic viability of a forestry company.

There can also be a number of benefits of an even broader nature. These include an improved business culture leading to higher self esteem in the forestry company, the option to become a serious player in forest policies and debate, the improvement of forest management by technical or commercial support, improved labour conditions leading to more safety and better tenure rights for the forest workers, and the benefit from increased employment (see for instance FSC 2003). And there can be benefits facilitated by certification for the local infrastructure, like roads, schools and health centres (Cashore et al. 2006). Interestingly, these additional benefits are often facilitated by international donor organizations supporting the certification process. But care is needed not to generalize, because these benefits will not always be present. For instance, Ahas et al. (2006) found that in Estonia, a consequence of certification was a decline in hectares available for timber production and a lower production pro hectare, resulting in fewer jobs.

Finally, new benefits may arise in connection with the biomass-for-energy and climate policies. Both the US and the EU give much support to the production of ethanol and biodiesel from biomass, although these programs are increasingly challenged because of their rather low effectiveness in CO_2 reduction (Farrell et al. 2006; Johnson and Heinen 2007) and because of their competition with food production and natural forests. Indeed, it can be observed that palm oil plantations are replacing old growth forests in Kalimantan on a large scale (http://www.foe.co.uk/resource/reports/oil_for_ape_summary.pdf). A requirement for biofuels to come from certified plantations may help to militate against this increasing threat to biodiversity and indigenous peoples. In the current first commitment period of the Kyoto Protocol (2008–2012) in the framework of the Clean Development Mechanism, only timber from afforestation and reforestation is eligible for carbon emission rights (Manguiat et al. 2005). It must be ensured that this will only pertain to certified plantations, under the requirement that reforestation does not replace recently converted natural forest.

We conclude that at the level of forest management, the main effects of certification relate to improved market access and sales agreements. Benefits due to price premiums cannot be generally expected, but this may change with the development of well-organized niche markets. International donors can help to facilitate the transition process; they do not provide economic sustainability, but they can provide a number of indirect benefits. Potentials in the framework of sustainable energy and climate policy have to be explored.

10.5 Development of Sustainable Forestry Certification

Forestry certification is a process that developed because it was broadly supported by a number of parties. Although it is first of all a private scheme supported by stakeholders in the value chain, national governments also provide substantial

support. Governments can require certification of state owned forests, or can choose certified timber products in their national procurement policies. Major support has also come from NGOs, most strongly from the WWF, which has played a pivotal role in the development of the FSC worldwide.

Globally, there are six important forestry certification initiatives, which work on the basis of independent ("third party") verification. These are the Forest Stewardship Council, the Program for Endorsement of Forest Certification schemes, the Sustainable Forestry Initiative, the Canadian Standard Association, the American Tree Farm System and the Malaysian Timber Certification Council. A short description of these programs and organizations is given below.

The Forest Stewardship Council (FSC) is housed in Bonn and is an international, non-profit, non- governmental organization founded in 1993. It is an association of representatives from environmental and social groups, the timber trade and forestry profession, indigenous peoples' organizations, community forestry groups and forest product certification organizations. It is the only system with global principles and criteria (FSC 2004a). Based on these principles and criteria are 62 national standards, each with their own adapted criteria and indicators (www.fsc.org).

The Program for Endorsement of Forest Certification schemes (PEFC) is also an independent, non-profit non-governmental organization, founded in 1999. It started as a European forest certification program, with the aim of creating a simpler alternative to the FSC but it now has a global reach and has consequently changed its name. It is an umbrella organization that accredits national schemes all over the world and is currently spread over 18 countries. In contrast to the FSC, this program explicitly advocates national sovereignty (www.pefc.org). Another difference concerns its main focus on ecological and market aspects.

The Sustainable Forestry Initiative (SFI) is a program of the American Forest & Paper Association. Adherence to the principles of this program is conditional for the members of this association. It was founded in 1994 and is now endorsed by PEFC (www.sfiprogram.info).

The American Tree Farm System (ATFS) is a program of the American Forest Foundation, a national non-profit organization. The ATFS was founded in 1941, and is the oldest third party forest certification system. It focuses on family forest owners, of whom 51,000 do participate (www.treefarmsystem.org).

The Canadian Standard Association (CSA) is an independent non-profit organization for the development of standards. The CSA Sustainable Forest Management (SFM) Project is part of it and was initiated in 1994, supported by the Canadian forest industry. Its certification scheme is modeled on the ISO 14000 series and is endorsed by PEFC (www.csa.ca). Many of the performance criteria are created at a regional, provincial level, in an interactive process with the stakeholders.

The Malaysian Timber Certification Council (MTCC) is an independent Malaysian non-profit organization for forestry certification. Like the FSC it also has a chain-of-custody certification. The criteria are set up in line with the FSC criteria and were adopted in 2002, but it is not endorsed by FSC. Its board includes representatives from academic and research and development institutions, the timber industry, non-governmental organizations and government agencies (www.mtcc.com.my).

In addition to these certification systems are a number of national certification schemes, which are not independently verified. In South-East Asia, examples include the Indonesian LEI system and Ecoforestry certification in Papua New Guinea. Like MTCC, these national systems are becoming more in line with the requirements of the FSC, with the aim of improving their reputations (Cashore et al. 2006).

Figure 10.1 presents the increase of forests, certified under the six forest certification initiatives mentioned above, for the period 1998–2006. In 2006 about 275 million hectares were certified by one of these six organizations (UNECE/FAO) 2006. This should be compared to the global total natural forest area for the year 2000 estimated at 3,682 million hectares, excluding plantations (FAO 2001). This means that in 2006, 7.5 percent of the natural forest areas were certified by one of the above schemes. But globally, certified timber products represent less than one percent of forest product sales (UNECE 2001). This seems to imply that on the average certification is applied to less productive forests.

The certified areas are not equally distributed throughout the world. At the end of 2000, about 92 percent of all certified forests were located in the United States, Canada, Finland, Sweden, Norway, Germany and Poland. At the same time, only four countries with tropical moist forests (Bolivia, Brazil, Guatemala and Mexico) were listed as having more than 100,000 ha of certified forests. According to FAO (2001) these forests amounted to a combined total area of 1.8 million hectares, which is about one percent of the total certified forest area. Kollert and Lagan (2007) presented a more recent figure of 3.6 million hectares, that amounts to nearly two percent (see Table 10.1). Despite the fact that forest certification started in the South, with the Smartwood Program of the Rainforest Alliance in 1990 in Indonesia, and despite the present increase in developing countries, we

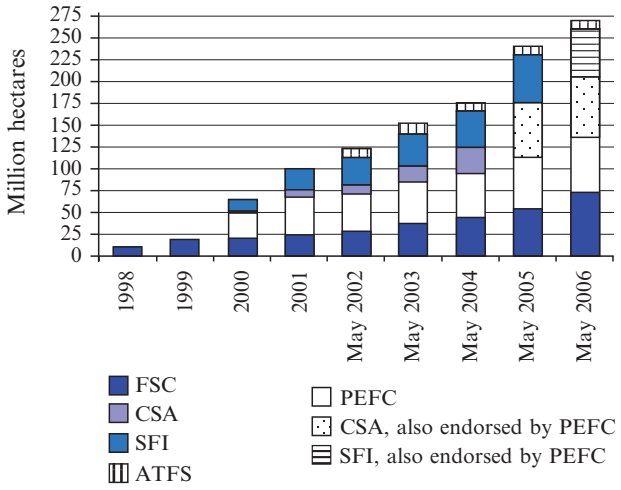

Fig. 10.1 The development of the certified forestry area worldwide for the period 1998–2006 under five different schemes (UNECE/FAO 2006)

must conclude that the main aim of sustainability certification, saving tropical forests, is still in its infancy. The reasons for this will be discussed in Section 10.8. As yet, forestry certification has lead mainly to qualitative improvements of forestry management in the North.

In what follows, we will focus further on certification under the authority of the FSC, because it is the best-known scheme in the developing world, and has recently established a program specifically aimed at smallholders in developing countries (see Section 10.9).

10.6 General FSC Requirements

To certify a forest area under the FSC certification scheme, a number of requirements must be met. In principle these relate to the three dimensions of sustainability, people, planet and profit, but in practice they focus on environmental and social conditions. The requirements are laid down in four different levels: principles, criteria, indicators and verifiers.

Principles are qualitative requirements at a policy level. This means that principles are issues that can be debated in a policy discourse. The international FSC principles apply to the following issues (in part as principles, in part just as issues) (www.fsc.org):

1. Compliance with laws (certification must not be illegal according to the national laws in question)
2. Tenure and usage rights
3. Indigenous peoples' rights
4. Community regulations and workers' rights
5. Benefits from the forest
6. Environmental impact
7. Management plan
8. Monitoring and assessment
9. Maintenance of high conservation value forests
10. Plantations

These principles are specified in the criteria, which all have to be met for certification. The FSC has 44 criteria in total for sustainable forestry management, with eight additional criteria for plantations.

Table 10.1 Total forest area, certified forest area, and forest area in developing countries (in million hectares) (Data from 2000: FAO 2001; data from 2006: Kollert and Lagan 2007)

Total forest area in 2000 (including plantations)	3,869	Plantations in 2000	187
Certified total forest area in 2000	210	Certified plantations in 2000	23
– of which in developing countries	1.8		
– idem, in 2006	3.6		

An example may clarify how the four levels relate to each other. Under the sixth principle, "environmental impact", the second criterion requires safeguards to protect rare, threatened and endangered species and their habitats, and to that end, conservation zones and protection areas shall be established. Indicators are defined at a national level. For instance, for FSC in the Brazilian Amazon, indicators relate to a 100 percent invetory of all threatened and endangered species, the steps taken for protection, the conservation of dead trees, the avoidance of fragmentation of habitats, agreements about scientific studies and the knowledge of the workers about species and habitats. At the lowest level, verifiers relate for instance, to areas demarcated on maps, management prescriptions and management records.

10.7 Requirements Associated with FSC for Plantations

In this section we will discuss the requirements specified for plantations, i.e., a core topic of this chapter. In 2000 there was a total of 187 million hectares of plantations worldwide, which is five percent of the total forest area of 3,869 million hectares (FAO 2001). Of this area a total 23 million has been certified under the FSC (see Table 10.1). As an example, in South Africa, 80 percent of the plantation sector supports FSC (Cashore et al. 2006). Certification of plantations is a contentious issue. On the one hand they are a large source of timber; with five percent of forest area they produce about 35 percent (expected to rise to 44 percent by 2020 [FSC 2005]) of all timber harvested. According to the FSC, this intensive form of forestry can alleviate the pressure on natural forests. Plantations also contribute significantly to carbon sequestration and can replace fossil fuels and increase biodiversity when established on degraded land (e.g., Lamb 1998; Montagnini and Porras 1998; Roshetko et al. 2002; Lal and Singh 2003; Redondo-Brenes 2007). The local employment they create is important socially (FSC 2005). The FSC's mission to certify forest plantations is based on positive assumptions regarding its effects, and is well expressed in the following adage: "While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests" (FSC 2005). This role of supporting the conservation of natural forests is clearly expressed in the FSC criteria and was finalized two years after completion of the criteria for the first nine principles set out in Section 10.6. They must be seen as additional and plantations must therefore meet the criteria for all ten principles.

However, compared to natural forests, these positives are counterbalanced by a number of negatives. Plantations often are the result of intensive exploitation of natural forests and are allied to biodiversity loss and disruption of soil hydrology and nutrient regimes (e.g., Schroth et al. 2002; Díaz et al. 2007; Pandey et al. 2007).

Much controversy also stems from conflicts over land use (e.g., Van den Top 2003), particularly between the owners of a plantation and the traditional use of the land by local people. In absence of land tenure, local people may be displaced, leading to increased deforestation elsewhere (Barney 2004; Nasreen 2007). Because of the differences in character between natural forests and plantations and the rather specific requirements for plantations, FSC in Brazil has developed an independent standard for plantations.

The criteria set out in principle 10 of the international FSC Principles and Criteria, can be summarized as follows:

1. The objectives of the plantation should be laid down in a management plan.
2. The plantation should help to conserve or restore the natural forest.
3. The plantation should be diverse regarding tree species, and the age and size of the trees.
4. There should be a preference for native species; monitoring of exotic species and their impacts.
5. Part of the plantation should be managed to restore the natural forest.
6. The management of the plantation should aim for soil conservation and good water quality.
7. The management should aim for integrated pest management.
8. The ecological and social impacts of the plantations should be monitored.
9. The plantation should not have been established in areas converted from natural forests after November 1994.

Criterion 9 may need some explanation. The date refers to the establishment of the standard and was included to discourage conversion of natural forests into plantations: such plantations cannot be readily certified.

Next, these criteria are expressed in a number of more specific indicators, which translate into requirements for practical management. These have not yet been developed for all regions. For instance, the Malaysian Timber Certification Council (MTCC) has not included criteria for plantations in its standard, and is now developing a special standard to this end. In Table 10.2, for each criterion for plantations of the international FSC Principles and Criteria, the indicators are presented with the Dutch national FSC standard as example (FSC/NL 2004).

In 2005, the total certified forest area increased to about 200 million hectares, worldwide. Of this total about 6 million hectares pertains to plantations, and a further 17 million hectares to mixed plantation-and-natural-forest, certified under FSC (FSC 2005). Of the plantations, on average 12 percent is covered by natural forest, clearly scoring beyond compliance with regard to indicator number five. However, due to the contentious nature of the plantations under FSC, and the need for further research in this area, a global process has recently been started under the authority of FSC-International, aiming at a review of the implementation of the environmental, social and economic criteria for plantations. The final technical phase of this review is about to begin (cf. www.fsc.org/plantations).

Table 10.2 Indicators for plantations for each of the criteria of the International FSC Standard, according to the National Dutch FSC Standard (FSC/NL 2004; see also www.fscnl.org)

International criterion	Dutch indicators (summarized)
1	The objectives of the plantation shall be explicitly stated in the management plan and demonstrated in its implementation
2	Plantations not established on land with high natural values
	No negative effect on adjacent forests
	Areas with high natural values are identified and recorded on maps
	Mosaics of stands must be identified in the management plan
3	Plantations smaller than 25 hectares consist at least of two tree species; larger plantations are drivers in species composition and age
	Individual forest stands should not exceed two hectares
4	No species planted on a large scale, unless proven well-adapted, non-invasive and without negative ecological impacts
	For exotic species proof of monitoring must be available
5	At least 10 percent of plantation is planted with native species
	At least five percent of the plantation will not be harvested
6	Management plan shall describe measures taken for soil and water conservation
7	Proof of monitoring available of pests, diseases, fire and invasive plants; evidence of measures taken against these
	Aim to control pests without chemical pesticides and fertilizers
	Chemical pesticides and fertilizers only permitted if no biological alternatives available or effective; manager must prove the need
8	Monitoring of negative effects on plantation and its surroundings
	Management plan shall include impacts of plantation on local welfare and social wellbeing
9	Only recent forests (planted after 1975) can qualify as plantation, older plantations are regarded as multifunctional forests
	Note: This does not replace the requirement that plantations should not be converted from natural forest after 1994

10.8 Barriers Towards Forestry Certification in Developing Countries

As already indicated in Section 10.5, the development of forest certification in developing countries lags behind the industrialized countries. The FSC systems and the connected MTCC system are the only ones to have third party verification to deal with certification in developing countries.

In developing countries barriers do exist for forestry certification and a lack of demand for certified timber products is a major constraint. An overview, based mainly on Molnar (2003) is given below of the main barriers, focusing on the role of smallholder tree growers in particular. First, there are policy and regulatory barriers to the extraction and processing of forest products. In this context it is important to point to the first principle of FSC, which requires compliance with existing laws. In particular, problems can lie in the prohibition of all logging in protected areas. Of course, a well functioning prohibition of these areas should be the ultimate aim, but many protected forests suffer from serious problems with illegal logging. In such

circumstances, sustainable forestry may create an effective counter force. An example is the Sierra Madre Natural Park on Luzon, the northern island of the Philippines. This park, a former site of the Conservation of Priority Protected Areas Project (CPPAP), is presently protected throughout by the National Integrated Protected Areas System (NIPAS) Law passed in June 1992. It has nevertheless been logged all over its western areas. In that section of the park sustainable forestry management may well be a real improvement on the present illegal situation. Yet, such a development is hampered by the existence of a law that is not adhered to (Snelder et al. 2005).

Secondly, there are a number of economic barriers, including the high costs associated with the first evaluation for qualification of the forest unit, the required yearly assessment procedures and the implementation of recommended actions with the aim of repairing shortcomings in the management. Price premiums should compensate for this but as seen in Section 10.4, such premiums do not generally exist. Moreover, it can be difficult to meet the high quality and quantity requirements associated with the given price premiums. Higher market prices may also not be realized in practice because of the lack of markets dealing specifically with certified timber, or with products made from it. This may particularly hold true in remote areas. For the initial costs such economic difficulties can in principle be overcome by support from donor organizations, but it is not always easy to find such an organization in practice. This is a particular problem for producers in remote areas who do not have easy access to such bodies.

Thirdly, there can be cultural and organizational barriers. The world of certifiers, who in line with the criteria ask for explicit formal plans and strict yearly auditing measures, is a very different place to that of smallholders or communities managing a plantation in developing countries. There will often be internal constraints in these communities against making the necessary organizational changes towards a more profitable business model. Higman and Nussbaum (2002) argue that the length and complexity of the standard constitutes a barrier in itself and in their opinion at least 27 of the 52 FSC criteria are inappropriate for small private forestry enterprises.

It is also believed that the sustainable use of natural forests faces competition from the cheaper plantations. Although this may be positive for the plantations, they themselves face competition from the even cheaper, unsustainable logging in natural forests. In addition, Cashore et al. (2006) have also stressed that a significant part of the forestry is managed by communities in developing countries. Community forestry is in general more complex than that conducted by individuals or companies. Although the FSC has special criteria for group certification, this creates another barrier to forestry certification in these countries.

10.9 The FSC SLIMFs Initiative

To address these barriers, the FSC has recently introduced the Small and Low Intensity Managed Forests (SLIMFs) Initiative (FSC 2003, 2004a, b, c) This program aims to allow certification bodies to use streamlined certification procedures

for small forest management units, low intensity management units and groups of these units. Small units are all forest areas under 100 ha or, depending on regional conditions, up to 1,000 ha. These units will often be part of smallholder farms. Low intensity units refer to units with operations such as non-timber forest product harvesting. Groups of management units enable certification by communities, while each of the members has his own private unit.

The new program involves a streamlining of the certification process for the target groups. On the basis of field trials, the international list of criteria has been adapted for small and low intensity units. In addition, the program allows for the development of national or sub-national criteria, which is well under way, together with the development of national indicators and verifiers.

The changes involve a reduction of the field audits, a simplification of the methodology used and of the way of reporting. In the main FSC program, a yearly site audit is required. In SLIMF this annual surveillance can be based on documentation audits and a minimum of one site visit must take place during the period of the certificate. These site visits may be undertaken in only one day, which is possible because of a focus on high-risk areas instead of a percentage-based areas audit. The reporting of the surveillance is also simplified, as it can be written in any language in a short report. For small management units, no peer review of the report is required.

Further streamlining lies in cost reduction by group certification. This enables many of the costs and work to be borne by a group of private companies, thus spreading them throughout the community.

Finally, certification has become a step-by-step process. Thus, over a five year period, timber from forestry-in-transition will get preferential treatment on the market. In 2002, the SLIMF's Initiative came into force. An overview in December 2006 (www.fsc.org/slimf) revealed that 39 forest areas, with a total of 110,000 ha (half of which was group certification, distributed over 15 countries) had qualified according to this scheme. Half of this area involves plantations in developing countries, including Namibia and Papua New Guinea.

10.10 Prospects for Certification of Plantations in the Philippines

In a developing country like the Philippines, it is questionable whether certification of plantations should be the first priority for protection of the forests. Given the rampant illegal logging, protection measures may well be directed first to the banning of illegal logging in high conservation value forests (see also Jurgens 2006). In the shadow of illegal logging, certification will not easily get off the ground, given the competition with the very low prices of illegal timber. For the country's government, the first priority may therefore lie there. In Indonesia encouraging developments take place in this respect at present (G. Persoon, personal communication 2007). Conversely, a check into the legality of imported timber may also be priority for the industrialized countries. Once the government has set its priorities and been able to get grip on illegal logging, the scene is ripe for private initiatives

for certification. In this section the viability of such a step for the Philippines is explored.

Plantations have had a varied history in the Philippines. In recent decades many policies have been launched to stimulate them, on the whole with a remarkably low rate of success. Between 1988 and 1992 alone, a total of $621 million was loaned to the Philippine government for the purpose of reforestation from, amongst others, the Asian Development Bank, who also lent another $200 million between 1993 and 1995. This huge budget was invested in various reforestation schemes, under full governmental authority and by stimulating private initiative, but results lagged severely behind expectations. A study conducted by Pasicolan (1996) revealed that only 10 to 15 percent of the planted trees survived and the reasons for these disappointing results were analyzed, by comparing successful and unsuccessful plantations run by communities. Important factors for achieving successful results included in particular, the need for intercropping so that the land continued to be productive for the community's direct needs, a direct interest by the community in the produce of the plantations, clearly established property rights over the plantations, a good organization of community co-operation, healthy finances of the project participants and the prospect of a good timber market.

In contrast to subsidized tree growing, spontaneous tree growing also appears to take place without any clear help from the government (Garrity and Mercado 1994), that is, the growth of small plantations for fuel wood and timber by individual smallholder farmers on their private farms. In general this relates to plantations of one to two hectares, as part of farms of about 10 hectares. The main drivers are an enterprising attitude of the farmers and good market conditions, including easy access to roads (Pasicolan 1996). Since the mid-nineties, this development has extended; at present this spontaneous development seems to offer the best prospects for increasing plantations, albeit with some governmental support, such as the provision of free seedlings.

The question is, as to what the prospects are for the application of sustainability certification for smallholders' plantations in the Philippines. This must clearly be a well-planned process as starting too quickly at farm level, without the involvement of the whole chain, could well result in failure.

It must be acknowledged that certification will, in general, only pay back on an international – mainly European – market because the organization of a niche market of buyers who are willing to pay a price premium can probably only be found there, aside from a small market formed by foreign and Philippine elite groups in Metro Manila. Indeed, examples elsewhere point to successes at a local market level. Ota (2006) described an example in Japan, where an ecological housing movement successfully realized FSC certification for over 11,000 ha with local supply. But on a country level, the factor that best explains the development of sustainable forestry management is the proportion of exported forest products (Van Kooten et al. 2005).

A crucial requirement is the constant high quality and sufficient quantities of the timber products (see also Kollert and Lagan 2007). This limits the use of a species like gmelina (*Gmelina arborea*), which is mostly grown in the spontaneous tree

plantations of individual farms. Wood from this species requires a thorough drying process, preferably by use of a timber drying machine or kiln, to achieve high quality. In contrast, the national and the international market in particular, demands species such as narra (*Pterocarpus indicus*) or tindalo (*Paludia rhomboidea*). The main reason for the smallholders' choice of gmelina is the high growing speed, allowing harvesting after seven to 10 years (between seven and 10 years, the production per tree doubles). High value hardwood species such as narra can only be harvested after 40 to 50 years, rendering their use in private smallholder plantations nearly impossible. A solution could possibly be found in the improvement of the quality of gmelina wood by the use of good quality seeds (Roshetko et al. 2004) and drying the timber in kilns instead of in the sun. Further ahead is quality improvement, for instance through treatment with so-called platonization, a process that consists of heating timber under pressure, of drying and then reheating (www.platowood.nl). This is a crucial first point for further investigation, the focus being on the required product quality.

A related point concerns the economics: the market prices along the value chain for different kinds of timber quality, and the potential price premiums that can be achieved due to certification. Plain gmelina wood is too cheap for transportation on an international market but high quality timber may well provide that opportunity. Some data, based on an exploratory field study by the authors, that compares wood and a wooden product from narra and gmelina along the value chain, is presented in Box 10.1. It can be concluded that there is a much smaller price difference between high quality gmelina and hardwood furniture than is the case for gmelina and narra wood at the level of producer to middleman. The tentative conclusion is that because of the high added value in the chain, the choice of the fast growing species is not prohibitive for a certification endeavor, provided that good wood quality is ensured.

There are a number of organizational questions, including the establishment of local or regional smallholder organizations, the link to a Philippine or regional umbrella organization, and finding a donor organization to facilitate the transition process. The most direct first step should involve a closer investigation of case studies about the use of certification in comparable situations in the Philippines or nearby countries.

In conclusion, there is a potential role for sustainability certification by smallholders for gmelina and the conservation of forests in the Philippines. The FSC SLIMF program offers the best prospects for that. A central point relates to the production of high quality lumber, enabling trade to take place on an international market. The main driver should be a desire for sustainable forestry, with its various qualitative benefits. From an economic standpoint, breaking even is the initial aim, but successful implementation would create opportunities for additional wood-based processing activities that are adjusted to international consumer needs and standards, and add value to the final product. After completion of an exploration of comparable case studies, the next step should be to organize the market and to find a donor organization to support the transition process.

Box 10.1 Price indications for narra and gmelina wood (in $ per m^3) and products (in $) along the value chain (Field data collected in 2005, from Isabela and Cagayan provinces in North Luzon, the Philippines)

Material/product	Narra	Gmelina
	(*Pterocarpus indicus*)	(*Gmelina arborea*)
Round log (diameter; cm)	(20–30)	(25–65)
– From farmer to middleman ($/$m^3$)	135–170	20–30
– From middleman to manufacturer ($/$m^3$)	215–230	60–75
Square log (thickness; cm)	(20–35)	(30–45)
From middleman to manufacturer ($/$m^3$)	215–245	105–130
Sawn wood (thickness, width, length; cm)	(5 × 30 × ≥ 365)	(5 × 30 × 245–305)
– From farmer to middleman ($/$m^3$)	245–290	75–105
– From middleman to manufacturer ($/$m^3$)	265–420	90–120
Unfinished rocking chair ($)		
– Pick up (= local market)	24	18
– Manilla	45	27
Finished rocking chair with carvings ($)		
– Pick-up (= local market)	27	20–22
– Manilla	54	36

The image of the hardwood narra is, like that of other hardwoods, very high. In contrast, the image of a softwood species, such as gmelina, is low. This is highlighted by the tendency of furniture shops to paint light colored gmelina furniture in the red narra color and is also clear from the price, which is much higher for narra wood and furniture. The question is, whether the low price of gmelina is in fact prohibitive for certification. If we compare the price that farmers or loggers receive from middlemen, there is about a factor 6 difference (about $135–170/$m^3$ for narra and $20–30/$m^3$ for gmelina, respectively). But if we go along the value chain, we observe that for the leading product in Luzon, a carved and varnished rocking chair, the price difference decreases to about a factor 1.5, both locally and in Manilla. Due to the larger added value along the chain, gmelina therefore seems to be a competitive product open for certification.

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